
Appendix A: Audit Notes from Sept to October 1999 to be compared with the Sheriffs determinations on cause of deaths – included are technical notes used to explain the gravity of the more serious findings to Directors so that they had no excuse after the fact to plead that they were not reliably informed

The Audit Notes consist of a feedback from interviews along with Progress Meetings where the serious findings using the Technical Notes were discussed up to Director level. The Technical Notes were used to communicate the concerns to those interviewed so that they could not say they didn't understand the gravity of the situation being discussed with them.

Temporary Repairs

The Sheriff determined the deaths were caused by a **materially defective temporary repair**, unlawful application of such repairs on hydrocarbon carrying pipework was an accepted finding from 1999 but actions to prohibit this were never implemented.

Permit to Work

The Sheriff determined the deaths could have been avoided if a permit had been used. **Violation of PTW was common in 1999 and also violation still common in 2003.**

Knowingly operating plant whilst it was in a dangerous condition

The Sheriff determined the deaths were caused by operating the de-gasifier vessel in a dangerous condition with its LCV and an ESDV known to be in a failed state. The Test Separator was being similarly run in 1999.

Follow the yellow trail from 1999 findings to the Sheriffs determinations into the causes of fatalities.

The Audit Trail takes you from what Directors were told on 22 Oct 1999 to 16.00 hours on 11th September **when** McCue and Moncrieff were presumed dead.

Progress Meeting 4 – Update to UEFA of visit to Brent Bravo

Present	
EPT-OM	Bill Campbell (Chair)
UEFA	Gerbrand Moyes
UEFA/1	John Madden
	Ken Merry
	Keith Mutimer

EPT-OM	Visit to Brent Bravo did not go well. Ken and I were taken aback by the apparent prevailing culture. Oil must be produced at all cost; Safety does not appear on the radar screen. There appears to be a brutal regime inflicted from the beach, Bayliss and Birnie seen to be the architects of it. OIM broke down under interview, how is this going on I ask, 'well if I do not do what is expected from me Bayliss will get someone else who will', he quotes. Informed UEFA that the workforce concerns recently expressed on BBC North and papers are valid, if anything understated. Why have the Offshore Safety guys down at Lord Cullen House not picked this up?
UEFA	Brinded had been interviewed by Internal Audit Committee. David Parkinsons's people had been told in confidence that there was a split in OSD staff, a few who supported Taf Powell with his proportionate laidback approach, facing open rebellion Powell had told them he had been requested by the Energy Minister to hold back, Brinded, and Finlayson publicly, had strongly refuted the union claims as exaggerated. UEFA confirmed that Malcolm had requested Helen Liddell to intercede. Brinded and Liddell had some sort of relationship, not known if this was sexual or just as the committee minuted 'a special relationship'.
UEFA	Given the sensitivity of all this, Gerbrand suggested in the interviews planned that the rest of the PSMR team be excluded from interviews that are likely to raise this subject with Brinded and Finlayson, John, Ken and Keith should concentrate on Brent as although there are problems elsewhere they are not so far apparently of the same magnitude. This was agreed.
UEFA/1	John to set up early meeting with UED, Bill and Ken will attend,
EPT-OM	Will prepare today a summary of hardware problems witnessed offshore, will copy UEFA and use in interview with Finlayson so he is fully briefed

WM Campbell

Signed:

on

SIEP EPT-OM

Lead Auditor on behalf of UEFA



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* MEETING WITH UED ARRANGED

Progress Meeting 5 – Interview with UED to feedback and discuss concerns about operations on Brent Bravo

	Present
EPT-OM	Bill Campbell (Chair)
UED	Chris Finlayson Production Director Oil
UEFA/1	Ken Merry
	File in UEFA safe storage
	Phase 3 Building

EPT-OM	<i>Visited Brent B from 7 till 10 September. Informed Chris Finlayson (CF) that visits to Brent Bravo did not go well. Discussed fully the concerns and passed him a copy of these in the prepared Audit Technical Notes, he was advised that all these issues would be discussed onshore with the technical custodians, engineering specialists, asset managers, and external PFEER verifiers in the next week or so, If these findings are understood and accepted by the auditee I will request UEFA to arrange early meeting with you and Brent Management team to resolve these issues and reduce risk</i>
UED	<i>Agreed</i>
EPT-OM	<i>However as can be seen from the Notes provided that Bravo is operating on many fronts in a dangerous condition. Behavior is driven by the demands from onshore to produce despite the associated risks. Advised that he needs to talk to Berget and Bayliss, we will meet them in the next week or so but there is no need to verify the findings as they were easily witnessed and accepted at every level, from technician to OIM, Expro needs to consider ceasing production until the serious breaches of PFEER and other regulations are rectified</i>
EPT-OM	<i>I have read the BBC North interview you gave to Colin Wight covered in the Scotsman and P&J. You paint a picture in so many words that the workforce concerns re Touch F All are exaggerated, a mere misunderstanding etc, reality the appalling conditions on the installation are worse, many times worse than they could imagine. You need to retract this statement, if not you are putting the reputation of Expro but also SIEP at great risk if you have been found to be deception</i>
UED	<i>Finlayson defended his position by stating he had used the information given to him by Bjorn Berget the Brent General Manager</i>
EPT-OM	<i>Informed UED that because of risks, to Expro reputation but also that of SIEP I will be communicating my concerns to EPT-OM asking him to discuss these serious concerns with your Regional Manger in The Hague. Under SIEP rules I cannot instruct you to cease operations but I make it clear that's what I recommend. I also concede this is not an oversight Audit on your Operations Unit by SIEP but rather I am a consultant under contract to lead your Review. Not also That although this work is called the Platform Management Safety Review (PSMR), under SIEP rules any Review completed by Auditors under Audit rules and develops findings that are agreed by the Auditee then it is an Audit. I only mention this because I can sense a defense being put down rate the consequences of the findings</i>
All	<i>These proceedings were read back to UED and agreed by all present as an accurate representation of the discussion</i>

*Note
WZ*

WM Campbell *[Signature]*
 Signed: on *17/9/1999*

SIEP EPT-OM
 Lead Auditor on behalf of UEFA

Interview with independent PFEER verification inspector

	Present
Bureau Veritas	PFEER inspector for Brent Facilities
UEFA/1	Ken Merry
UEFA	File in UEFA safe storage
	Phase 3 Building

note	<i>External independent inspector not named in line with SIEP audit procedures and sensitivity of subject matter, amended Technical Notes as a result of his input</i>
BV	<i>Inspector painted a picture of his dealings with the Brent Asset Manager David Bayliss. It was a constant struggle to get access to him, his letters requesting access to the platforms were ignored, some platforms like Brent Delta he had never visited for 13 months. If he arrived at the office to see Bayliss he had been humiliated when told to F-off. He told that on one occasion he was coerced by Bayliss to sign off a whole tranche of oil mist detectors on BD as being in good working order but when after a year or so he eventually got access he found the detectors had been isolate for over a year.</i>
EPT-OM	<i>It was obvious on our visit to Brent Bravo that there was an extreme disregard for compliance with the testing of safety critical equipment, and maintenance generally. Compliance was reported in SAP as circa 96% but the actual compliance was 14%. Everybody offshore was aware of this, Wood Group the contractor seemed quite happy with their lot as they had an incentivized contract, they were paid for the 96% although they were well aware offshore that this reported value was meaningless, all this part of the so-called Touch F- all instruction issued by the Brent manager. We have still to verify all this through interviews at Seafield House but don't hold out any hopes that it will be better than reported but at least we will determine how his non-compliance is being authorized. Note also from inspection of reports from previous audit that there were 96 overrides on safety critical fire and gas and other systems on BD, and we found 29 on BB. We have a major concern re PFEER, its noted that on BB there was a goal widening approach adopted, when for example the deluge systems did not activate within the designated time period the standard was changed from 20 to 120 secs, the same for ESDV leak off criteria, these were changed from the statutory limit of 1 to 4 then later to 20 times the value. I think you would agree to our findings that in the Brent field generally the statutory verification re SCE is not being met through willful negligence</i>
BV	<i>Agreed</i>
EPT-OM	<i>Amended Technical Notes containing the inspector's input at the interview discussed with him by phone and agreed as accurate, these will be attached with these minutes in a Note to File</i>
UEFA/1	<i>Requested Ken take this matter up with UEFA and discuss with the Brent Head of Inspection and UESE re the risk and obvious legal implications</i>
All	<i>These proceedings were read back to BV inspector and agreed by all present as an accurate representation of the discussion</i>

NB: PFEER is the Prevention of Fire, Explosion and Emergency Response Regulations which are mandatory as covered in the installation Safety Case. Bureau Veritas has a contract to provide independent competent assessment that Shell are meeting its statutory requirements under PFEER and this entails regular free and unobstructed access to the offshore installations Brent Alpha, Bravo, Charlie and Delta.

WM Campbell. EPT-OM *W Campbell* Lead Auditor on behalf of UEFA,

Signed:

on *29/9/99*

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Interview with Brent Asset Manager

	Present
EPT-OM	Bill Campbell (Chair)
UEDN	David Bayliss (DB)
UEFA	Ken Merry
A/UEFA	Keith Mutimer
Location	Seafield House
UEFA	File in UEFA safe storage, Phase 3, Tullos

EPT-OM	<i>We found Brent Bravo operating in appalling conditions with risks levels clearly in the intolerable range. UEFA has already discussed our concerns with UED and I asked Finlayson to contact and discuss with UE. I would like to go through the Technical Notes highlighting our principal concerns, at the end of this discussion we will ask you if you agree with what we have covered and if the findings are disputed by you, or not</i>
EPT-OM	<i>Operation of the Test Separator to augment production whilst is in a dangerous condition, that is in breach of design codes, Expro codes of practice and such an operation is not allowed in the Manual of Permitted Operations (MOPO).</i>
DB	<i>Agreed with a shrug, no defense put forward</i>
EPT-OM	<i>Operating a Fire pump continually when it is connected through a manual x-over valve into the service water ring main This way of operating since you lost the Drilling service water pump into the sea. This is bad enough, but the PCV on the service water main is defective, failed in fully open position. Should the platform trip on high level gas for example and you need the fire pumps in anger there will be insufficient water to supply seawater deluge systems and hydrants. Not only is this unlawful but it raises the risks to people also risks to the impairment of the temporary refuge (TR).</i>
DB	<i>Agreed, no defense</i>
EPT-OM	<i>We heard from Ian Tope UESE that tests on ESDV are being falsified. Our findings support this and it is yet another example where production dominates any concerns about risk. The records are being completed as No Fault Found when in fact the LOT results at 20 scm/m are 20 times greater than that set in your Safety Case. Despite complaints from onshore system custodians you are acting autonomously with no regard to the advice from the functional specialists, you appear to treat them, including the independent PFEER inspector, who is more or less banned from getting access to you, and from ever going offshore, with contempt. The PFEER inspector informed us that some time ago you pressurized him to sign off - as in good order- a whole tranche of fire and gas systems on Delta, but when he eventually got out to Delta, he found all the line of sight gas detectors isolated, is this true?</i>
UEDN	<i>Agreed yet again with no denial and also no argument to support what he was doing</i>
EPT-OM	<i>Spoke earlier about how you are operating Test Separator, in this condition there is a high risk of gas breakthrough from the vessel into the storage cell because you cannot control the liquid level in the vessel. From my experience an explosion in an enclosed column is very bad news, on Cormorant A in 1989 the effects of that explosion was mitigated when the explosion relief device operated, but on Bravo the explosion relief cover has two marine containers with a combined TARE of some 20 tones sitting almost permanently atop the cover. Spoke to the toolpusher, Walter Allan, he was with me on Brent A, he is aware he should not use this spot but with so much going on there is extremely restricted space on the skid deck</i>
EPT-OM	<i>You are recording for August 96% completion for safety critical maintenance but we have gone through the data in SAP in these offices and the actual completion was 14%. This false reporting is prevalent on Bravo but also on your other 3 installations. This behavior is as direct result of your instruction, the so-called Touch F All memo sent to all OIM's. UED Finlayson claimed in September in an interview with Colin Wight of BBC North and others that TFA was just a misunderstanding, the claims by unions were exaggerated etc., but in reality, your TFA instruction has led to a situation where almost nothing is getting done, you just can't carry on like this, you need to retract that instruction. Finlayson told us his reply to the media was based on assurances he got from Berget. Were you involved in all this public deception?</i>
DB	<i>No, the TFA thing was never intended to have the effect that it has, the platforms were tripping because of carelessness carrying out inspections and tests, these caused us considerable downtime, I had to do something, I was getting it in the neck from Brinded</i>

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EPT-OM	Dave, this TFA is having another effect, Permits are not getting raised because the permit would be used against the culprits, as you see them anyway, if the platform tripped spuriously. This is what happens when the offshore guys are scared shitless of you Dave, and the brutal regime you are running. This is a common theme that Ken and I ran into, everything that is being done, the separator, the Fire pumps the violations of PTW etc, is being done in your name, why is this happening? This would not have been possible only a few years ago when I left, can you imagine Brian Ward and Keith Allan putting up with this
DB	Yes Bill, but its all changed since your day, we have to answer to Brinded now
EPT-OM	Dave that's the third time you've blamed Brinded for your ills. You're the bloody Asset Manager its up to you to stand your ground, the truth appears to Ken and me is that you are perfectly happy to do your masters bidding, you seem more interested in being in the McKinsey top quartile, in truth Dave you don't seem to care a hoot for the 1600 or so crew working in your brutal regime, Foaming at the mouth and blaming Brinded isn't going to save you should the inevitable happen, your streetwise enough to know that
EPT-OM	One more item and then I will sum up. We have been at this for almost 3 hours and we will schedule in another meeting there is more we want to raise especially your unacceptable treatment of your staff and the independent inspectors. Change Control, I wont insult you by explaining to you what the codes of practice say on change control, As Asset Manager you are <u>not authorized</u> to instruct offshore staff to make physical changes to plant & equipment without the prior approval of a competent person onshore, are you? I take that as a No. We came across at least 14 temporary repairs, clamps and patches almost half on hydrocarbon pipes. This is against your Codes of Practice and SIEP rules, the plant must be shut down until a spool piece is fitted and hydrotested in situ, you simply should not be doing this. None of these patches were approved, also not listed on a register, the fact is Dave if you aggregate the risks to the POB we have the separator, the fire pumps, the isolation of fire and gas sensors, the overrides and inhibits in the CCR, the goal widening of performance criteria for Safety Critical Equipment (SCE), the false reporting of maintenance compliance, the falsification of ESDV tests, restricted explosion venting from the columns, unapproved temp repairs and on top of that a crew conditioned by you to do your bidding, avoid using the PTW system and other chronic violations, all driven by your TFA slogan My point, and which I will take yet again up the line to the Hague if necessary, is nobody has the big picture that I have just fed back to you. From technician to OIM people know a little of what's going on in their sphere but putting it all together required this audit. My rough estimate is that individual risk per annum on Bravo may be higher than 1000+ times the value in your Safety Case, and TRIF of the same order
DB	Bill you can report what you like, I guarantee when your report is gathering dust I will still be here and you'll be gone, they need me to run these four big beasts, its all that bastard Brinded's fault, he even has the cheek to ask me to get more involved in all this Enhance Expro shit, its unbelievable, I'm under a great deal of stress, I'm doing what he wants me to do, big numbers and straight lines, your living in the past Bill, this is today's reality,
EPT-OM	David, its obvious you are under stress\ you appear unbalanced in your decision making, remote from your decisions with an apparent lack of empathy for the guys working for you, I seriously suggest you seek medical advice, I'm sure Ken will agree
All	These discussions were read back to the Asset Manager and agreed to be an accurate representation of our three-hour discussion

WM Campbell.

Signed:

SIEP EPT-OM
Lead Auditor on behalf of UEFA

on

4/10/99



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ANTISOCIAL PERSONALITY DISORDER

Sociopathic Behavior Traits observed in Brent Asset Manager

Witnessed Behavior for example in Emergency on Scene Commanders, or generally if the Person being observed is under Stress, ref Commanders six-part checklist, courtesy of Royal Navy

Witnessed behavior under interview	Evidence of enactment of behavior
Regularly flouts or breaks the Law	Operation of Test Separator and Fire pumps, and acceptance of the unreliability of Emergency Generator. He accepted these violations of procedures and his part in causing same, e.g. PTW. His priority to keep gas export flowing at all costs. Non-compliance with critical safety equipment, understood fully the potential consequences, but didn't seem to care
Lies and Deceives	Lied to Bureau Veritas PFEER inspector that safety critical fire and gas detection systems on Brent D were in good order when in fact they had been isolated as being unserviceable for over a year
Impulsive and doesn't plan ahead	Impulsively took disciplinary action against staff whom he accepted were not in any way to blame, he said to <i>save face</i> . No plan for example to reinstall Drilling Service water pump, just unlawfully use Fire Pumps forever
Little regard for safety of others, no empathy for staff he treated abysmally or whom he put at occupational risk	Discussed that risks of continued operation of Bravo were intolerable you need to shut it down. That's never going to happen was the reply
Irresponsible	Acting with wicked recklessness, no empathy for his employees, seemed detached from reality, it was surreal, no caring for the health and safety of 1600 or so employees offshore although he was completely aware of what his actions were doing. Constantly blamed his boss, namely his MD Malcolm Brinded
Doesn't feel remorseful for the effects his behavior has on others	Refer to impulsive behavior above, also his Head of Inspection had been off sick 'savaged' it seems by him, he showed no sign of remorse, no apologies for his atrocious treatment of people but did not seem to care. Never apologized, never said sorry for his behavior

- (1) Sociopathic and psychopathic behavior is similar but, in the latter, they are more severe
- (2) Witnesses to Behavior at interview of Asser Manager on 1/10/99 by the Author and Ken Merry, Operations Auditor, UEFA, Aberdeen

WM Campbell EPT-OM

Signed on 5 /10/99 as an accurate assessment of behavior witnessed

Acting as Lead Auditor for PSMR on behalf of UEFA: Sept to Oct 1999



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SIEP EPT-OM Lead Auditor on behalf of UEFA

Second Interview with Chris Finlayson

	Present
EPT-OM	Bill Campbell (Chair)
UED	Chris Finlayson Production Director
UEFA	Ken Merry
UEFA	File in UEFA safe storage, Phase 3, Tullos

EPT-OM	<p>Chris thanks for seeing us at short notice. You are restricted in time so I will get to the point. We interviewed Dave Bayliss on Friday last week and it was not a pleasant experience. We went through the Technical Notes from Bravo which has been amended since you first saw them with the details of the interview with Bureau Veritas. All the findings he accepted, not the slightest hesitation, he seemed relieved to open up, coincidentally he does not hold you or Berget in high regard, he implies that he answers to Brinded only. He seemed to me to be mentally unbalanced, somehow isolated in his mind from the decisions he is taking and the foul way he treats people. From my training and experience he exhibits psychopathic tendencies when his behavior is checked against my 6-point checklist. He like you I imagine blames Brinded for his predicament, over and over again he did that. Anyway, advised him, Ken agrees with this, towards the end of a three-hour session, when he was not under stress, rather was relieving his stress by his outpouring. We asked him to seek medical advice, which I understand he has done. There is a final presentation, think the date planned for this is 22 October, will recommend as representative of Shell International that if no action is taken in the interim that Berget, Bayliss and Birnie be suspended with immediate effect pending an investigation into their unacceptable conduct. Due to the sensitivity will not mention our concerns re Bayliss but suffice to say these minutes will be kept by UEFA because in my opinion, an opinion shared by the PSMR members involved in looking at the Brent and its operations, that if we continue operating Bravo in its current condition a major incident involving injury or fatality, and with the potential of impairing the TR is inevitable. It may take a week or a year, it doesn't matter, it will happen. You also need to consider your position. You are clearly working under instruction from Malcolm to keep a lid on this bag of worms, you should not be confident if the worst happens that the bold Malcolm will protect you, you will be hung out to dry to protect the golden boy's progression up the ladder. It's very much in your interest to copy him on these discussions. In any case the Corporate Management System (CMS) which is the foundation for the oilfield Safety Cases make clear that the Production Director is accountable for the health and safety of the thousand souls working offshore in the Brent, Central and Northern fields, and although we concentrate on Brent there are serious problems everywhere, we look, Audit is simply a sampling process, the more w look the more we will find.</p>
EPT-OM	<p>Other business, you are aware that your internal audit committee interviewed Brinded who accepted he asked his friend the Energy Minister to intercede to prevent the OSD investigation into the workforce concerns, Yes. I know quite a lot about Liddell, I was brought up in a coal mining area near her constituency in Shotts and Airdrie. These are communities where respect has to be earned and I understand from my family, some of whom are politically active trade unionists, that she is well respected locally. She has a fearsome reputation as a hard-nosed politician but I am completely certain that she will not be aware of this PSMR and its finding or she would not have acted to assist Malcolm. Also, I doubt that Taf Powel and his merry men down at Lord Cullen House have been informed also. Will take your lack of denial as affirmation of this</p>
All	<p>These minutes were read back to the Production Director and agreed to be an accurate representation of our discussions</p>

WM Campbell: 
 Signed: _____ on 

SIEP EPT-OM acting as Lead Auditor on behalf of UEFA,

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Preliminary Meeting with Brent Management Team

	Present
EPT-OM	Bill Campbell (Chair)
UEFA	Gerbrand Moyes -
UEFA	Ken Merry and Keith Mutimer
UED	Chris Finlayson
UEDN	Bjorn Berget – Brent GM and Graham Birnie – Deputy AM
UEFA	File in UEFA safe storage, Phase 3, Tullos

EPT-OM	<i>The Audit Technical Notes updated after the interview with the PFEER independent inspector from Bureau Veritas were used as subject for discussion. Thanks to UED, we had a meeting with him squeezed into a busy yesterday where we spent most of that time discussing Dave Bayliss and his response to us at an interview on Friday past. It is sensitive and will leave it up to UED to discuss with Bjorn as he sees fit</i>
EPT-OM	<i>We are disappointed, stunned even, to learn from Gerbrand that despite our appeals to reduce risk, on Brent Bravo particularly, nothing as yet appears to have been done. I met Chris some time ago to update him on our concerns within days of our return from Bravo. This installation is operating with unacceptable levels of risk; hopefully after this meeting some action will be taken. Your workforce and the public are blissfully unaware of the risks, asked Chris to retract the comments he made to the media but that hasn't been done also. The bottom line is that TFA is alive and well breeding in what we witness as a brutal regime with ongoing denial of the risks.</i>
BB	<i>There is quite a bit of push back from my people, what exactly do you expect from me</i>
EPT-OM	<i>You have all read the Notes, Bayliss has accepted all this with no challenge, so with reference to the rigor of your Level 2 audit process when the findings covered in the technical Notes are accepted by the auditee they are then to be converted in a timely manner into actions by the auditee. We assist in that process. There should be no energy taken up by denial after all he is the accountable person as Asset Manager, if he accepts the findings that should be the end of the matter. We also hear feedback that PSMR is not an audit, to clarify SIEP rules which we all work under, any Review whether Health and Safety or Business controls is deemed an Audit if it is carried out by Internal Auditors and it comes up with findings with recommended actions for improvement</i>
BB	<i>Bayliss hasn't returned to work since you interviewed him on Friday, he is suffering from severe stress I hear; perhaps it was your interview techniques Bill.</i>
EPT-OM	<i>Yes, Bjorn we hear the messages coming from Seafield House, the audit is a personal vendetta by me against Dave etc. Ken Merry can confirm yes Bayliss was under stress during the interview but he blamed the situation he was in on one man, Malcolm Brinded, he was foaming at the mouth, couldn't get his condemnations of Malcolm out rapidly enough, it was an easy interview for an auditor, it was surreal, like a confessional where he was baring his soul looking for some sort of redemption. Secondly, I have known Dave for a couple of years before I left for the Hague in 1996, you should be aware that he was promoted in 95, Brian Ward, Peter Reiss and I were on the panel, so since I was involved in his promotion and have since had no contact with him in 4 years there doesn't seem to be any merit in pursuing the vendetta line, the last person who would support that would be Bayliss himself. The irony is, everybody offshore blames him and he blames Malcolm</i>
EPT-OM	<i>It's approaching a month since we first met UEFA followed by UED to express our concerns about Bravo. As far as the PSMR team is aware nothing has been done on Bravo to reduce risks. This is unacceptable; you are operating many systems unlawfully. David Bayliss should not continue as Asset Manager and since this negative safety culture has flourished in Seafield House, where extreme denial is the norm, both you Bjorn and Graham should seriously consider your position.</i>

WM Campbell

Signed:

on 5/10/99

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Meeting with Deputy Brent Asset Manager at Seafield House

	Present
EPT-OM	Bill Campbell (Chair)
UEDN/1	Graham Birnie
UEFA	Keith Mutimer
UESE	Peter Wyatt – Head of Safety Department
UEFA	File in UEFA safe storage, Phase 3, Tullos

Intro	<i>Graham we welcome Peter along to listen to the discussion, and contribute as he sees fit, he has been requested to attend on behalf of UED and UE</i>
EPT-OM	<i>Graham, we had a 3-hour interview with Dave on 1st October since then he has been on sick leave, have you heard from him?</i>
UEDN/1	<i>No, just from HR that he is suffering from stress and anxiety, we do not know when he will return</i>
EPT-OM	<i>The formality of the Audit process as I explained at the recent preliminary meeting on the 5th October is that the Asset Manager has accepted the findings but since he is absent, we need to clarify a couple of points again with you, and for Peter. Also, if there are some other issues of importance, or which are bothering you, for example the conduct of the PSMR etc, please feel free to get it off your chest. As far as Brent is concerned this should be our last interview, phase one of the PSMR will complete after the upcoming Management presentation and then we will go onto to develop meaningful recommendations with you and the other Asset Manages involved in Northern and Central fields</i>
UEDN/1	<i>Understood, nothing to add</i>
EPT-OM	<i>The three biggest risk concerns re hardware are (1) the continual operation of the Fire pumps, we recommend you cease Drilling and close the valve connection from the firewater main to the service water main, at the same time with Drilling suspended ensure pressure relief pots above cellar deck of columns are unrestricted. This X-over valve closure will allow Fire pumps to brought back to good condition ready immediately in an emergency as is your legal commitment. At some point in the near future repair the PCV on the seawater discharge to sea. Before commencing Drilling, you should repair the corroded caisson and reinstall a pump to supply drilling in future, understood? (2) Stop the constant use of the Test Separator to augment production and repair the LCV and upstream and downstream XCV and ESDV failing we understand due to sand erosion, understood. Using it in the manner being done is in breach of the design codes API 14 and API15G, the DnV technical codes and your own codes of practice. This eliminates any risk of gas blow by from the Separator into the storage cells with potential gas leakage above the Column's gas tight floor, understood? (3) Sand erosion as you are aware as a Maintenance Engineer seems to be the principal failure mode on your hydrocarbon piping, its only gong to get worse over time. Stop installing temporary repairs on hydrocarbon lines it breaks every rule in the Shell rules book, understood?</i>
UEDN/1	<i>Yes, to points (1), (2) and (3)</i>
EPT-OM	<i>Thank you for that, we seem to be making progress, Peter any comments, No</i>
EPT-OM	<i>There is much evidence, not just on Bravo, that the performance criteria of ESDV are being amended in an unauthorized way, in fact one ESDV is now sitting with a leak off rate of 20 scm/min which is 20 times higher than the limit stated in your Safety Case. This has to stop. Before you change the performance standards for any safety critical equipment including ESDV you must seek PRIOR approval from the technical authority this being in writing, understood?</i>
UEDN/1	<i>Yes</i>
EPT-OM	<i>We have reviewed the records by sampling a number of ESDV records in the field after being informed by one of Peter's engineers Ian Tope that ESDV maintenance records are being falsified. With respect to Bravo it is noted that the principal ESDV valve on the gas</i>

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	<i>riser failed its LOT and was now operating at circa 4 scm/m although the maintenance records entered into SAP state quote No Fault Found unquote. Graham this is a very serious offence an it has to stop, understood</i>
<i>UEDN/1</i>	<i>Yes understood</i>
<i>EPT-OM</i>	<i>We could spend the rest of the day discussing the behavioral problems caused by what we legitimately call a brutal regime. It will need a concerted campaign from UE down to correct what you have developed over the last 5 years into a totally negative safety culture where your crewmembers offshore are conditioned to break every rule in the book to keep production going at all costs. This was evident under interview from technician to OIM and is also prevalent in these offices. Since Dave is the architect of this demise and since you support him and your boss Berget also, I will recommend at the final presentation that you all are suspended pending and investigation into your unacceptable behavior, understood?</i>
<i>UEDN/1</i>	<i>Yes, understood he said with a smile!</i>
<i>All</i>	<i>These minutes were read back to the Production Director and agreed to be an accurate representation of our discussions</i>
<i>UESE</i>	<i>After the meeting was suspended asked Peter Wyatt for his opinion in Mutimer's presence Peter you look visibly shaken, is the situation as a as we reported to UED, Yes Bill, but its worse much worse</i>
<i>EPT-OM</i>	<i>Peter will you ensure that your concerns are made known to Chris Finlayson and Malcolm Brinded</i>
<i>UESE</i>	<i>Yes, Bill absolutely, you a count on that</i>

WM Campbell

Signed:

on

SIEP EPT-OM

Lead Auditor on behalf of UEFA,

Strictly Confidential

Appendix B: Briefing notes to Directors and Brent Managers from the Chief Internal Auditor attempting without success to get them to act to reduce intolerable risk levels offshore.

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From Gerbrand Moeyes UEFA Tel ext. 630 2821
To Chris Finlayson UED Date 20/10/99
Tom Botts UEG

Subject:**Platform Safety Management Review Briefing Note**

Please find attached a briefing note highlighting the main issues emerging from the Platform Safety Management Review of which you are the sponsors. The review has identified some significant concerns. Some suggestions for immediate actions that can be taken by the BU's to address the most pressing of these concerns, that may have direct exposure, are made at the end of the note. The review team is still working on the Draft PSMR report, which will contain the full set of DRAFT recommendations.

To date, there has been limited feedback of the results of the review to senior management. The meeting held on 5/10/99 was an interim feedback to a limited audience with the primary purpose of clarifying some of the issues that had arisen around the NBU. In view of the sensitivity and potential management implications, I believe that an in-depth session with UED, UEG, UE and the GM's is needed. This should cover the full perspective of the concerns and also address the best way forward.

Some of the issues, which present a direct exposure, require quick action and I understand that UEDN and UEDC have already started to address these. I am also aware that UEDN is preparing follow-up activities on the underlying causes and related organisational and management aspects. However, I am not convinced that an effective approach is being taken. In view of the sensitivity of the review, we need to agree with you how the follow-up and communication can be planned and conducted in the most expedient and effective manner.

UEFA = CHIEF INTERNAL AUDITOR
SHELL EXPRO

UED = PRODUCTION DIRECTOR
NORTHERN OPERATIONS

UEG = GAS DIRECTOR
SOUTHERN OPERATIONS

**Shell Expro
Platform Safety Management Review (PSMR)
A Briefing Note (20/10/99)**

To: UED/UEG
From: UEFA

Purpose of this Briefing Note

To highlight immediate concerns arising from the PSMR in advance of the final Level 1 Review Report. The subsequent Level 1 report will provide more detail and also highlight observed areas of best practice.

Interim Opinion / rationale

There are significant weaknesses in essential controls, which require senior management attention.

Resources and Standards

Following the transition to Enhanced Expro (post technical function) there is a strong reliance on the corporate 'glue' being provided by Process Owners Forums (POFs), supported by service providers in UESC and UESE to set and review standards. However, POFs have varying effectiveness - in some cases they actively review and set standards whereas in others the role is largely passive. POFs will offer advice when requested however the Asset Manager can reject such advice if they so wish. Most notably, in the context of this review, there was evidence of the Maintenance POF having raised serious concerns within the organisation but these concerns remain. In addition, the effectiveness of the POFs in proactive skill-pool management remains an area of weakness.

Safety Case Management and Risk Assessment

Under the Safety Case legislation Duty Holders are expected to demonstrate in their day to day operations that the risks on their offshore installations are ALARP. On Brent Bravo for example, with a POB of 156 there were high activity levels, combined with equipment operating outside its design envelope, a significant number of overrides and other weaknesses in direct controls including inappropriately authorised changes to safety critical equipment. However, the Asset Management team could not clearly demonstrate a holistic approach to the management of risk on the installation. Our concern is that the platform may be operating at risk levels in the intolerable region.

There were also concerns on the rigour of the decision-making process around approval of design changes. In some instances, persons approving such changes (including operating outside the design and operations envelope) may not be sufficiently experienced or adequately informed to take such decisions.

People within the organisation are taking decisions in isolation which may not appear unreasonable, but after the event could have severe implications e.g. changing ESDV leak-off test criteria from 1 scm/m to 4 scm/m to 20 scm/m. Also, where equipment fails to meet its performance criteria, simply relaxing the standard seems to have become a normal response. No evidence was found of cases where hardware modifications are made to enable equipment to subsequently meet its original standard.

Procedures

Under interview, recognition and acknowledgement of violation of procedures by people is variable. However, review of hand-over notes indicates that violation is common. Many such violations are apparent to the general workforce. This would be a serious reputation issue after a major event. People are coping, and to cope sometimes means to violate. Violations observed varied in severity from procedural non-compliance related to the PTW, to knowingly operating plant outwith its design and operating limit. In one specific case involving operation of an oil separator, the violation was known about and accepted up to the

level of a Senior Manager. There was evidence of false and misleading information in maintenance records for safety critical equipment, for example the Brent Bravo ESDV which failed its leak-off test in April 1998 was recorded as 'NO FAULT FOUND'.

Implementation and Performance Monitoring

PFEER Examination and DCR Verification Schemes

The general level of understanding of these schemes throughout the organisation is poor and even encompasses the limited knowledge of some people who work the process on a day to day basis. A significant concern is the effectiveness of the PFEER process. This is a statutory scheme ensuring that PFEER safety critical elements on an offshore installation are examined and tested in accordance with the Duty Holders' published performance standards. A number of offshore systems can not currently meet their published performance standards. These standards in turn are being relaxed with no demonstration of a robust assessment of the risks involved. There is also divergence in standards being applied pan Expro e.g. leak-off testing for riser ESDV's. Where cited in the Duty Holder's written scheme, the 2nd Party Verifier (UESE/6) should validate and approve any changes to these performance standards but this does not always happen. Concerns expressed to the review team by an independent PFEER examiner included pressure being exerted to sign off non-compliance's. Evidence was obtained of a report being signed off prior to remedial actions being undertaken.

Maintenance Non-compliance

Sampling revealed many examples of non-compliance with safety critical and other routine maintenance. Much of this non-compliance appears driven by the requirement to prevent production deferment. As an example, the process for authorising deferments in NBU had significant weaknesses (now being revised). Changes in reporting parameters resulting from the introduction of SAP-PM have served to highlight the non-compliance issue (in the sense that 'true compliance' is now monitored and reported). However, the general prevalence of non-compliance is not directly attributable to SAP.

Technical Integrity Reporting and Overview

Based on fieldwork in the Northern Business Unit, Technical Integrity information given to Managers is fundamentally flawed. There is no data validation at source by the people compiling the NBU report. Key performance indicators lack clear definition (e.g. gas releases) and acceptable control limits have not been established (e.g. number of overrides on a specific installation). No person at any level in the organisation appears to have a concise overview of the technical integrity status of a specific offshore installation, (e.g. collective picture of loss of containment risks due to unauthorised clamps on hydrocarbon carrying pipework, thin wall pipework due to corrosion or erosion, etc at any moment in time.)

Note – circulation of this Briefing Note

UED and UEG are the Oil and Gas Director, Chris Finlayson and Tom Botts respectively

UEFA is the Internal Audit Manager, Gerbrand Moyes

The CRO conceded that these overrides should be logged in the book and perhaps the reason why they were not was that the situation had developed over time. Initially they would be applied for short periods and this crept up over weeks to the situation where they were now applied constantly. The inspector onboard confirmed that he had a responsibility for independently verifying overrides and inhibits in the CCR. He was not aware, had not been informed, about these overrides

(c) The CCR layout and the DCS display etc ha been much improved as part of the refurbishment project. However the CRO was always involved in some action or other including answering telephones and responding to signals from his DCS display. Although during steady operations he was confident of controlling the levels in the test separator by manual intervention if there was a problem with the process, or a trip or change of platform status caused alarm flooding, that during these hectic periods there was always the chance that he could overlook the separator levels being distracted by other events. One of his concerns also was that for operators entering the legs to carry out operations checks etc he would have additional duty as leg sentry monitoring what was going on and this could also distract his attention, particularly if there was a problem in the column

NOTES : OPERATING SEPARATOR
IN THIS CONDITION & DEVIATED
FROM CODES OF PRACTICE &
PLATFORM OPERATIONS PROCEDURES
MANUAL, ISSUED BY, AND
AUTHORISED BY THE AUTHOR IN
1994. THIS IS AN EXAMPLE OF
KNOWINGLY OPERATING PROCESS
EQUIPMENT WHEN IT WAS IN
A DANGEROUS CONDITION WITH
RISK OF GAS-BLOWBY TO SYSTEMS
DOWNSTREAM NOT RATED FOR
THE 120 BAR INLET PRESSURE
TO THE SEPARATOR.

Shell U.K. Exploration and Production

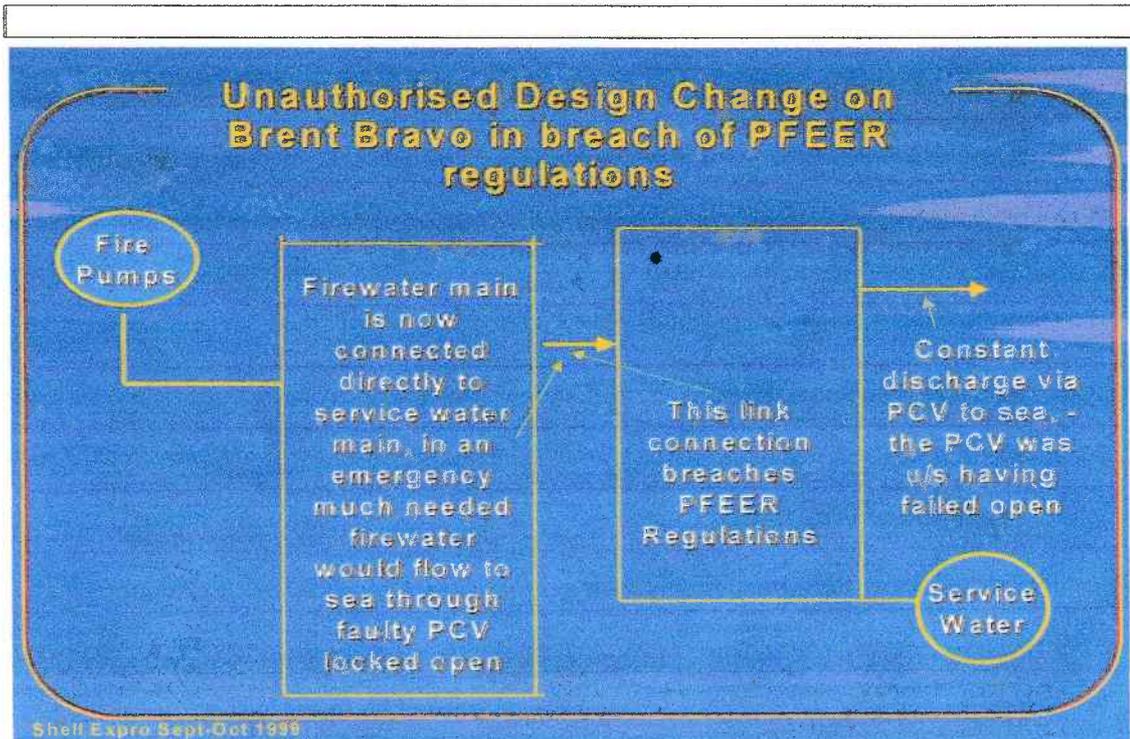


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Updated 20/9/99
W Campbell



Unauthorised Changes to Safety Critical Equipment

Brent Bravo had lost into the sea (corroded caisson) a seawater pump dedicated to supply the Drilling process. In order to save OPEX/CAPEX in purchasing a new pump, a decision was made to utilise firewater to augment the service water system. A full-bore connection was now constantly open between the firewater main and the service water main. As a result of this change the modus operandi was that one 100% duty firepump was running continuously into the service water system. Additionally, and to compound matters, the second firewater pump was of suspect reliability. The CRO Handover notes stated 'standby firepump about goosed, only run in anger'. In the same Handover Notes the PCV on the service water main was noted to be 'jammed open' and this situation had persisted for many weeks. As a consequence insufficient firewater would have been available for firefighting. If there was a power failure as a result of coincidental high levels of gas for example, the service water pumps would be isolated and thus unavailable and with the pipework as configured the firewater pumps would discharge their output directly to sea via the jammed open PCV - even if the unreliable second pump was started an operator would have had to go to the crossover between the fire and service main to close this valve manually.

When questioned the Operations Supervisor/OIM were aware of this situation but again indicated that these decisions were taken by the beach and known about and accepted by the Asset Manager. It was verified that to their knowledge no risk assessment of operating in this way had been carried out and they were not aware however if the relevant technical authority had approved this change.

It was later verified onshore that the Engineering Manager, as design authority, was not aware of and had thus not approved this change.

Aide Memoir: It was also observed from comments in the CRO Handover Notes that the functionality of the emergency generator was suspect with comments 'air in lube oil, don't run unless needed'

Other Business

Updated 20/9/99 *WT*

TFA = TOUCH F-ALL
ASSET MANAGERS WRITTEN
INSTRUCTION TO ALL BRENT FIELD

Line of sight gas detectors

All the hydrocarbon module line of sight gas detectors had their executive actions inhibited. There was no valid justification for this. These detectors from time to time operate spuriously for a variety of reasons and they were therefore only isolated to prevent a process shutdown – a part of TFA policy. The inhibition of these systems was logged in the CCR. No QRA or other qualitative analysis had been completed to justify the inhibition of this crucial equipment, and no authorisation via change control process had been raised with a technical authority.

Control of Overrides on Safeguarding Systems

There were 29 overrides logged in the CCR logbook. These overrides were on process control and safeguarding instrument functions – again as with the LOS detectors no justification of the risks had been produced and no change control procedure authorising the overrides had been raised. The only justification forthcoming was with the overrides in place it reduced the probability of spurious trip of the process – TFA policy.

Failure to comply with essential Maintenance

Compliance with safety critical maintenance and inspection was as low as 14%. Almost all of this deviation from the target figure of 100% was part of the TFA policy. It was noted that some systems such as water deluge were overdue their test period by 12 months. It was also noted from historic records that a number of systems which were overdue had failed when eventually tested, so there was a known and accepted high failure rate for safety critical systems designed to mitigate against the escalating hydrocarbon or other top events. A number of these systems had 'hidden failure modes', that is the Operator would not be aware the system had failed until it was called upon to operate.

On checking on the beach, of a sample of 75 systems, which had not been examined and/or tested in August, only 5 approved deviations for the non-testing of these systems had been raised. It should be noted that all the SCE on Brent Bravo had their periodicity set following Failure Mode Effects and Consequence Analysis (FMECA) as part of a huge investment around 1992/3 in Reliability Centred Maintenance. In short if the SCE is not examined and/or tested within the scheduled period then the risks of the SCE failing on demand rises as time expires. This is why 100% compliance with the examination and testing of SCE is essential and mandatory as the Shell policy standard. Not to comply at 100% is accepting residual risk levels significantly above ALARP levels.

Safety Critical Equipment performance under test – a goal 'widening' regime

Records indicated that on Brent Bravo when SCE failed its performance criteria during test, the criteria simply changed, and the records changed to show 'test results acceptable'. For example seawater deluge operation within 20 seconds changed to 120 seconds. ESDV leak of test criteria increased by 4 times then to 20 times the original mandatory level. No example could be found of any SCE equipment, which had failed its performance test that was corrected at the time until it met the Company standard performance criteria. Before changing any of the Company performance criteria the Asset Manager should have sought approval from Expro internal verification department, but he did not. Also the technical authority responsible for change and variance control under mandatory Expro codes of practice should also have been in the loop but he was not.

Interviews with the department responsible for the internal verification scheme UESE/4 highlighted that they were aware of what was happening in Brent but accepted that they were unable to do anything about it, they appeared passive. The external verifier ^{TULLOS} ~~DAV~~ was interviewed at Venans House. He was also aware that performance criteria were being widened. He raised many concerns and complained that he could not get reasonable access to the Asset Manager to discuss his concerns. He stated in one example that he had been coerced into signing of documentation that the oil mist detector system on BD was in order. He did this in the promise from Shell that they would rectify faults in this system and put it into effect with some immediacy. When he then visited BD some 13 months later he found the oil mist detection system had been permanently isolated. When challenged if he had raised

atmosphere breathing apparatus should be donned immediately.

One member of each working party in the utility shaft must now carry a radio and checks of the radio's function must be carried out. Radio dead spots have been mapped and additional radio aerials have been installed to improve radio communication. Also standardisation of radio channels has been completed.

The C.C.T.V. system in the utility shaft has been upgraded. •

The closed drain degasser rundown line which runs from the process drains degasser vessel has been completely replaced with corrosion resistant material. There is also an engineering project underway to reroute the rundown lines, which carry crude oil to the storage cells, outwith the utility shaft.

15. DETERMINATION

In terms of Section 6(1) of the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976 I find as follows:-

- (a)..... Sean Scott McCue, born 2 August, 1981, who resided at Springbank Cottage, Hallfields Court, Kennoway, and Keith Scot Moncrieff, born 20 December, 1957, who resided at 108 Main Street, Invergowrie, Tayside, both died sometime between 15.30 hours and 19.55 hours on 11 September, 2003 on the Brent Bravo offshore platform situated in Quadrant 211, Block 29 at Latitude 61 degrees 03 minutes 21.031 seconds North, Longitude 01 degrees 42 minutes 47.155 seconds East in the United Kingdom sector of the North Sea Continental Shelf.
- (b)(i)... The cause of death of both Sean Scott McCue and Keith Scot Moncrieff was inhalation of hydrocarbon vapours;
- (ii)... The cause of the accident which resulted in the deaths of both men was the release, and vaporation, of liquid hydrocarbons through a hole, caused by corrosion, in the closed drain degasser rundown line within the utility shaft of the Brent Bravo offshore platform.
- (c)..... The accident which resulted in the deaths of Sean Scott McCue and Keith Scot Moncrieff might reasonably have been prevented if:-
- (i)..... an appropriate temporary repair had been applied to the hole on the closed drain degasser rundown line such as a fully engineered repair and not a repair

using a neoprene patch and jubilee clips;

(ii)..... the temporary repair had been appropriately managed in order that a replacement spool could have been fitted within a reasonable time on a section of a safety critical line which was known to be corroding;

(iii)..... the permit to work system had been followed which would have involved a risk assessment resulting in an isolation*and drain down of that section of the closed drain degasser rundown line prior to any attempt to remove the neoprene patch.

(d)..... Defects in the system of working which contributed to the accident which resulted in the deaths were:-

(i)..... a failure to clearly set out the limits which applied to the work which could be carried out, in the utility shaft, under the operations umbrella, and a failure to ensure that personnel on board the Brent Bravo offshore platform clearly understood those limits;

(ii)..... a failure to carry out a robust risk assessment of the possible consequences of starting up the platform on 22 August, 2003 in the knowledge that emergency shutdown valve EZV 44715 had failed to operate within specification when tested during the annual platform shutdown.

Sheriff of Grampian, Highland & Islands at Aberdeen.

ABERDEEN, July, 2006.

Bill Campbell. DMS. MIBM. MIEE. B.Sc. C.Eng.

Background of Author - In 1992 to 1996

I was Head of Operations and Maintenance Strategy for Shell Expro based at Tullis Aberdeen. Many of the Codes of Practice deviated from as illustrated in this submission were issued and approved by me, in Shell parlance I was the Technical Authority.

Shell U.K. Exploration and Production



Bill Campbell
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1996 onwards

Having been transferred from Aberdeen in 1996 to The Hague, at the time of the 1999 Audit I was asked to lead the Audit into the Management of Safety by the Internal Audit Department (UEFA) in Aberdeen. I was what was called a Global Consultant for Operations and Maintenance Strategy development worldwide, and their Senior Maintenance Engineer - under employment with Shell Exploration and Production (SIEP), located at the Research and Technical Services laboratory in The Hague. Also, during that period, a Technical Auditor charged with leading such Health, Safety and Environmental audits worldwide. In this role in 1999 was under contract employed as Lead Auditor assisted by operational auditors from Aberdeen, and the ongoing results of the Audit, and the Audit itself, was carried out on behalf of Chief Internal Auditor in Aberdeen. The Audit had as its objective to review, the Management of Safety in Shell Expro operations, at the time. From 2003, I was re-employed by Shell following retirement, under contract with (SIEP), to carry out such audits, the contract extended to 2008.

Bill Campbell



Bill Campbell
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as a true testimony of the facts as described in this submissionP